

Abstract of the Disclosure

A current sensor arrangement for measuring electrical current flow (subject flow) includes an elongated conductor for carrying the subject flow through a region. A magnetic field sensing device is located in the region, and produces a sensed voltage representative of the magnitude of the magnetic field in the region. A test generator generates a magnetic field component having "known" magnitude in the spatial region. The test generator is gated, so that the magnetic field changes when the test generator is ON. If the test generator generates its magnetic field by passing a test current through the spatial region, the change in the magnetic field, which is expressed in the sensed voltage, is related to the test current. Simple control circuit processing determines the subject current from the sensed magnetic field and the known magnitude of the test current. (138)